

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/788,847A
Source: JFWO
Date Processed by STIC: 12/8/06

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/788,847A

CRF Edit Date: 12/8/06
Edited by: ze

___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

☒ Deleted: ☒ invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

___ Moved responses to same line as heading/numeric identifier, specifically:

___ Other:



IFWO

RAW SEQUENCE LISTING

DATE: 12/13/2006

PATENT APPLICATION: US/10/788,847A

TIME: 16:15:05

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\12132006\J788847A.raw

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3 <110> APPLICANT: Nakamura, Yusuke
4       Furukawa, Yoichi
6 <120> TITLE OF INVENTION: Gene and Protein Relating to Hepatocellular
Carcinoma and Methods
7       of Use Thereof
9 <130> FILE REFERENCE: 25371-021 CIP
11 <140> CURRENT APPLICATION NUMBER: US 10/788,847A
12 <141> CURRENT FILING DATE: 2004-02-27
14 <150> PRIOR APPLICATION NUMBER: PCT/JP02/09876
15 <151> PRIOR FILING DATE: 2002-09-25
17 <150> PRIOR APPLICATION NUMBER: US 60/324,261
18 <151> PRIOR FILING DATE: 2001-09-25
20 <150> PRIOR APPLICATION NUMBER: US 60/391,666
21 <151> PRIOR FILING DATE: 2002-06-26
23 <150> PRIOR APPLICATION NUMBER: CASN 2,399,569
24 <151> PRIOR FILING DATE: 2002-08-23
26 <150> PRIOR APPLICATION NUMBER: 60/450,644
27 <151> PRIOR FILING DATE: 2003-02-28
29 <160> NUMBER OF SEQ ID NOS: 83
31 <170> SOFTWARE: PatentIn version 3.2
33 <210> SEQ ID NO: 1
34 <211> LENGTH: 1622
35 <212> TYPE: DNA
36 <213> ORGANISM: Homo sapiens
39 <220> FEATURE:
40 <221> NAME/KEY: CDS
41 <222> LOCATION: (96)..(1382)
43 <400> SEQUENCE: 1
44 gtgcgcgcag ggcgcaggcg cgcgggtccc ggcagcccgt gagacgcccg ctgctggacg      60
46 cgggtagccg tctgaggtgc cggagctgcg ggagg atg gag ccg ctg aag gtg      113
47                               Met Glu Pro Leu Lys Val
48                               1               5
50 gaa aag ttc gca acc gcc aac agg gga aac ggg ctg cgc gcc gtg acc      161
51 Glu Lys Phe Ala Thr Ala Asn Arg Gly Asn Gly Leu Arg Ala Val Thr
52           10               15               20
54 ccg ctg cgc ccc gga gag cta ctc ttc cgc tcg gat ccc ttg gcg tac      209
55 Pro Leu Arg Pro Gly Glu Leu Leu Phe Arg Ser Asp Pro Leu Ala Tyr
56           25               30               35
58 acg gtg tgc aag ggg agt cgt ggc gtc gtc tgc gac cgc tgc ctt ctc      257
59 Thr Val Cys Lys Gly Ser Arg Gly Val Val Cys Asp Arg Cys Leu Leu
60           40               45               50
62 ggg aag gaa aag ctg atg cga tgc tct cag tgc cgc gtc gcc aaa tac      305
63 Gly Lys Glu Lys Leu Met Arg Cys Ser Gln Cys Arg Val Ala Lys Tyr
64 55                               60                               65                               70

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66	tgt	agt	gct	aag	tgt	cag	aaa	aaa	gct	tgg	cca	gac	cac	aag	cgg	gaa	353
67	Cys	Ser	Ala	Lys	Cys	Gln	Lys	Lys	Ala	Trp	Pro	Asp	His	Lys	Arg	Glu	
68					75					80					85		
70	tgc	aaa	tgc	ctt	aaa	agc	tgc	aaa	ccc	aga	tat	cct	cca	gac	tcc	gtt	401
71	Cys	Lys	Cys	Leu	Lys	Ser	Cys	Lys	Pro	Arg	Tyr	Pro	Pro	Asp	Ser	Val	
72				90					95					100			
74	cga	ctt	ctt	ggc	aga	gtt	gtc	ttc	aaa	ctt	atg	gat	gga	gca	cct	tca	449
75	Arg	Leu	Leu	Gly	Arg	Val	Val	Phe	Lys	Leu	Met	Asp	Gly	Ala	Pro	Ser	
76				105					110					115			
78	gaa	tca	gag	aag	ctt	tac	tca	ttt	tat	gat	ctg	gag	tca	aat	att	aac	497
79	Glu	Ser	Glu	Lys	Leu	Tyr	Ser	Phe	Tyr	Asp	Leu	Glu	Ser	Asn	Ile	Asn	
80				120					125					130			
82	aaa	ctg	act	gaa	gat	aag	aaa	gag	ggc	ctc	agg	caa	ctc	gta	atg	aca	545
83	Lys	Leu	Thr	Glu	Asp	Lys	Lys	Glu	Gly	Leu	Arg	Gln	Leu	Val	Met	Thr	
84	135					140					145				150		
86	ttt	caa	cat	ttc	atg	aga	gaa	gaa	ata	cag	gat	gcc	tct	cag	ctg	cca	593
87	Phe	Gln	His	Phe	Met	Arg	Glu	Glu	Ile	Gln	Asp	Ala	Ser	Gln	Leu	Pro	
88					155					160					165		
90	cct	gcc	ttt	gac	ctt	ttt	gaa	gcc	ttt	gca	aaa	gtg	atc	tgc	aac	tct	641
91	Pro	Ala	Phe	Asp	Leu	Phe	Glu	Ala	Phe	Ala	Lys	Val	Ile	Cys	Asn	Ser	
92				170						175					180		
94	ttc	acc	atc	tgt	aat	gcg	gag	atg	cag	gaa	gtt	ggg	gtt	ggc	cta	tat	689
95	Phe	Thr	Ile	Cys	Asn	Ala	Glu	Met	Gln	Glu	Val	Gly	Val	Gly	Leu	Tyr	
96				185					190					195			
98	ccc	agt	atc	tct	ttg	ctc	aat	cac	agc	tgt	gac	ccc	aac	tgt	tcg	att	737
99	Pro	Ser	Ile	Ser	Leu	Leu	Asn	His	Ser	Cys	Asp	Pro	Asn	Cys	Ser	Ile	
100		200					205						210				
102	gtg	ttc	aat	ggg	ccc	cac	ctc	tta	ctg	cga	gca	gtc	cga	gac	atc	gag	785
103	Val	Phe	Asn	Gly	Pro	His	Leu	Leu	Leu	Arg	Ala	Val	Arg	Asp	Ile	Glu	
104	215					220					225				230		
106	gtg	gga	gag	gag	ctc	acc	atc	tgc	tac	ctg	gat	atg	ctg	atg	acc	agt	833
107	Val	Gly	Glu	Glu	Leu	Thr	Ile	Cys	Tyr	Leu	Asp	Met	Leu	Met	Thr	Ser	
108					235					240					245		
110	gag	gag	cgc	cgg	aag	cag	ctg	agg	gac	cag	tac	tgc	ttt	gaa	tgt	gac	881
111	Glu	Glu	Arg	Arg	Lys	Gln	Leu	Arg	Asp	Gln	Tyr	Cys	Phe	Glu	Cys	Asp	
112				250					255					260			
114	tgt	ttc	cgt	tgc	caa	acc	cag	gac	aag	gat	gct	gat	atg	cta	act	ggg	929
115	Cys	Phe	Arg	Cys	Gln	Thr	Gln	Asp	Lys	Asp	Ala	Asp	Met	Leu	Thr	Gly	
116			265				270						275				
118	gat	gag	caa	gta	tgg	aag	gaa	gtt	caa	gaa	tcc	ctg	aaa	aaa	att	gaa	977
119	Asp	Glu	Gln	Val	Trp	Lys	Glu	Val	Gln	Glu	Ser	Leu	Lys	Lys	Ile	Glu	
120		280					285					290					
122	gaa	ctg	aag	gca	cac	tgg	aag	tgg	gag	cag	gtt	ctg	gcc	atg	tgc	cag	1025
123	Glu	Leu	Lys	Ala	His	Trp	Lys	Trp	Glu	Gln	Val	Leu	Ala	Met	Cys	Gln	
124	295					300					305				310		
126	gcg	atc	ata	agc	agc	aat	tct	gaa	cgg	ctt	ccc	gat	atc	aac	atc	tac	1073
127	Ala	Ile	Ile	Ser	Ser	Asn	Ser	Glu	Arg	Leu	Pro	Asp	Ile	Asn	Ile	Tyr	
128					315					320				325			
130	cag	ctg	aag	gtg	ctc	gac	tgc	gcc	atg	gat	gcc	tgc	atc	aac	ctc	ggc	1121

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131 Gln Leu Lys Val Leu Asp Cys Ala Met Asp Ala Cys Ile Asn Leu Gly
132          330          335          340
134 ctg ttg gag gaa gcc ttg ttc tat ggt act cgg acc atg gag cca tac      1169
135 Leu Leu Glu Glu Ala Leu Phe Tyr Gly Thr Arg Thr Met Glu Pro Tyr
136          345          350          355
138 agg att ttt ttc cca gga agc cat ccc gtc aga ggg gtt caa gtg atg      1217
139 Arg Ile Phe Phe Pro Gly Ser His Pro Val Arg Gly Val Gln Val Met
140          360          365          370
142 aaa gtt ggc aaa ctg cag cta cat caa ggc atg ttt ccc caa gca atg      1265
143 Lys Val Gly Lys Leu Gln Leu His Gln Gly Met Phe Pro Gln Ala Met
144 375          380          385          390
146 aag aat ctg aga ctg gct ttt gat att atg aga gtg aca cat ggc aga      1313
147 Lys Asn Leu Arg Leu Ala Phe Asp Ile Met Arg Val Thr His Gly Arg
148          395          400          405
150 gaa cac agc ctg att gaa gat ttg att cta ctt tta gaa gaa tgc gac      1361
151 Glu His Ser Leu Ile Glu Asp Leu Ile Leu Leu Glu Glu Cys Asp
152          410          415          420
154 gcc aac atc aga gca tcc taa gggaacgcag tcagagggaa atacggcgtg      1412
155 Ala Asn Ile Arg Ala Ser
156          425
158 tgtctttgtt gaatgcctta ttgaggtcac acactctatg ctttgtttagc tgtgtgaacc      1472
160 tctcttattg gaaattctgt tccgtgtttg tgtaggtaaa taaaggcaga catgggtttgc      1532
162 aaaccacaag aatcattagt tgtagagaag caccgattata ataaattcaa aacatttggt      1592
164 tgaggatgcc aaaaaaaaaa aaaaaaaaaa
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168 <211> LENGTH: 428
169 <212> TYPE: PRT
170 <213> ORGANISM: Homo sapiens
172 <400> SEQUENCE: 2
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175 1          5          10          15
178 Gly Leu Arg Ala Val Thr Pro Leu Arg Pro Gly Glu Leu Leu Phe Arg
179          20          25          30
182 Ser Asp Pro Leu Ala Tyr Thr Val Cys Lys Gly Ser Arg Gly Val Val
183          35          40          45
186 Cys Asp Arg Cys Leu Leu Gly Lys Glu Lys Leu Met Arg Cys Ser Gln
187          50          55          60
190 Cys Arg Val Ala Lys Tyr Cys Ser Ala Lys Cys Gln Lys Lys Ala Trp
191 65          70          75          80
194 Pro Asp His Lys Arg Glu Cys Lys Cys Leu Lys Ser Cys Lys Pro Arg
195          85          90          95
198 Tyr Pro Pro Asp Ser Val Arg Leu Leu Gly Arg Val Val Phe Lys Leu
199          100          105          110
202 Met Asp Gly Ala Pro Ser Glu Ser Glu Lys Leu Tyr Ser Phe Tyr Asp
203          115          120          125
206 Leu Glu Ser Asn Ile Asn Lys Leu Thr Glu Asp Lys Lys Glu Gly Leu
207          130          135          140
210 Arg Gln Leu Val Met Thr Phe Gln His Phe Met Arg Glu Glu Ile Gln
211 145          150          155          160

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Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\12132006\J788847A.raw

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214 Asp Ala Ser Gln Leu Pro Pro Ala Phe Asp Leu Phe Glu Ala Phe Ala
215          165          170          175
218 Lys Val Ile Cys Asn Ser Phe Thr Ile Cys Asn Ala Glu Met Gln Glu
219          180          185          190
222 Val Gly Val Gly Leu Tyr Pro Ser Ile Ser Leu Leu Asn His Ser Cys
223          195          200          205
226 Asp Pro Asn Cys Ser Ile Val Phe Asn Gly Pro His Leu Leu Leu Arg
227          210          215          220
230 Ala Val Arg Asp Ile Glu Val Gly Glu Glu Leu Thr Ile Cys Tyr Leu
231 225          230          235          240
234 Asp Met Leu Met Thr Ser Glu Glu Arg Arg Lys Gln Leu Arg Asp Gln
235          245          250          255
238 Tyr Cys Phe Glu Cys Asp Cys Phe Arg Cys Gln Thr Gln Asp Lys Asp
239          260          265          270
242 Ala Asp Met Leu Thr Gly Asp Glu Gln Val Trp Lys Glu Val Gln Glu
243          275          280          285
246 Ser Leu Lys Lys Ile Glu Glu Lys Ala His Trp Lys Trp Glu Gln
247          290          295          300
250 Val Leu Ala Met Cys Gln Ala Ile Ile Ser Ser Asn Ser Glu Arg Leu
251 305          310          315          320
254 Pro Asp Ile Asn Ile Tyr Gln Leu Lys Val Leu Asp Cys Ala Met Asp
255          325          330          335
258 Ala Cys Ile Asn Leu Gly Leu Leu Glu Glu Ala Leu Phe Tyr Gly Thr
259          340          345          350
262 Arg Thr Met Glu Pro Tyr Arg Ile Phe Phe Pro Gly Ser His Pro Val
263          355          360          365
266 Arg Gly Val Gln Val Met Lys Val Gly Lys Leu Gln Leu His Gln Gly
267          370          375          380
270 Met Phe Pro Gln Ala Met Lys Asn Leu Arg Leu Ala Phe Asp Ile Met
271 385          390          395          400
274 Arg Val Thr His Gly Arg Glu His Ser Leu Ile Glu Asp Leu Ile Leu
275          405          410          415
278 Leu Leu Glu Glu Cys Asp Ala Asn Ile Arg Ala Ser
279          420          425
282 <210> SEQ ID NO: 3
283 <211> LENGTH: 55
284 <212> TYPE: DNA
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
290 <400> SEQUENCE: 3
291 caccaaactt atggatggag cacctttcaa gagaaggtgc tccatccata agttt      55
294 <210> SEQ ID NO: 4
295 <211> LENGTH: 55
296 <212> TYPE: DNA
297 <213> ORGANISM: Artificial Sequence
299 <220> FEATURE:
300 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
302 <400> SEQUENCE: 4

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RAW SEQUENCE LISTING

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DATE: 12/13/2006

TIME: 16:15:05

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\12132006\J788847A.raw

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303 aaaaaaactt atggatggag caccttctct tgaaaggtgc tccatccata agttt      55
306 <210> SEQ ID NO: 5
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308 <212> TYPE: DNA
309 <213> ORGANISM: Artificial Sequence
311 <220> FEATURE:
312 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
314 <400> SEQUENCE: 5
315 caccaatcag agaagcttta ctcatctcaa gagaatgagt aaagcttata tgatt      55
318 <210> SEQ ID NO: 6
319 <211> LENGTH: 55
320 <212> TYPE: DNA
321 <213> ORGANISM: Artificial Sequence
323 <220> FEATURE:
324 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
326 <400> SEQUENCE: 6
327 aaaaaatcag agaagcttta ctcatctctc tgaaatgagt aaagcttata tgatt      55
330 <210> SEQ ID NO: 7
331 <211> LENGTH: 55
332 <212> TYPE: DNA
333 <213> ORGANISM: Artificial Sequence
335 <220> FEATURE:
336 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
338 <400> SEQUENCE: 7
339 caccaacaaa ctgactgaag ataagttcaa gagaaggtgc tccatccata agttt      55
342 <210> SEQ ID NO: 8
343 <211> LENGTH: 55
344 <212> TYPE: DNA
345 <213> ORGANISM: Artificial Sequence
347 <220> FEATURE:
348 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
350 <400> SEQUENCE: 8
351 aaaaaacaaa ctgactgaag ataagtctct tgaaaggtgc tccatccata agttt      55
354 <210> SEQ ID NO: 9
355 <211> LENGTH: 55
356 <212> TYPE: DNA
357 <213> ORGANISM: Artificial Sequence
359 <220> FEATURE:
360 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
362 <400> SEQUENCE: 9
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366 <210> SEQ ID NO: 10
367 <211> LENGTH: 55
368 <212> TYPE: DNA
369 <213> ORGANISM: Artificial Sequence
371 <220> FEATURE:
372 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
374 <400> SEQUENCE: 10
375 aaaaaactcg taatgacatt tcaactctct tgaagttgaa atgtcattac gagtt      55

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/788,847A

DATE: 12/13/2006
TIME: 16:15:06

Input Set : A:\pto.kd.txt
Output Set: N:\CRF4\12132006\J788847A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:37; N Pos. 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40
Seq#:44; N Pos. 485,486,487,488,489

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:80

VERIFICATION SUMMARY

DATE: 12/13/2006

PATENT APPLICATION: US/10/788,847A

TIME: 16:15:06

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\12132006\J788847A.raw

L:705 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0

L:813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:480

Raw Sequence Listing before editing (for reference only)

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IFWO

RAW SEQUENCE LISTING

DATE: 12/08/2006

PATENT APPLICATION: US/10/788,847A

TIME: 14:46:51

Input Set : A:\25371-021CIP Sequence Listing.txt

Output Set: N:\CRF4\12082006\J788847A.raw

3 <110> APPLICANT: Nakamura, Yusuke
 4 Furukawa, Yoichi
 6 <120> TITLE OF INVENTION: Gene and Protein Relating to Hepatocellular Carcinoma and
 Methods
 7 of Use Thereof
 9 <130> FILE REFERENCE: 25371-021 CIP
 11 <140> CURRENT APPLICATION NUMBER: US 10/788,847A
 12 <141> CURRENT FILING DATE: 2004-02-27
 14 <150> PRIOR APPLICATION NUMBER: PCT/JP02/09876
 15 <151> PRIOR FILING DATE: 2002-09-25
 17 <150> PRIOR APPLICATION NUMBER: US 60/324,261
 18 <151> PRIOR FILING DATE: 2001-09-25
 20 <150> PRIOR APPLICATION NUMBER: US 60/391,666
 21 <151> PRIOR FILING DATE: 2002-06-26
 23 <150> PRIOR APPLICATION NUMBER: CASN 2,399,569
 24 <151> PRIOR FILING DATE: 2002-08-23
 26 <150> PRIOR APPLICATION NUMBER: 60/450,644
 27 <151> PRIOR FILING DATE: 2003-02-28
 29 <160> NUMBER OF SEQ ID NOS: 83
 31 <170> SOFTWARE: PatentIn version 3.2

Does Not Comply
 Corrected Diskette Needed
 (pg.1)

ERRORED SEQUENCES

1623 <210> SEQ ID NO: 83
 1624 <211> LENGTH: 30
 1625 <212> TYPE: DNA
 1626 <213> ORGANISM: Artificial Sequence
 1628 <220> FEATURE:
 1629 <223> OTHER INFORMATION: An Artificially Synthesized Oligonucleotide Sequence
 1631 <400> SEQUENCE: 83
 1632 gcgggaggat ggagccgctg aaggtggaaa
 30

E--> 1638

Deleted

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/788,847A

DATE: 12/08/2006
TIME: 14:46:52

Input Set : A:\25371-021CIP Sequence Listing.txt
Output Set: N:\CRF4\12082006\J788847A.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:80

VERIFICATION SUMMARY

DATE: 12/08/2006

PATENT APPLICATION: US/10/788,847A

TIME: 14:46:52

Input Set : A:\25371-021CIP Sequence Listing.txt

Output Set: N:\CRF4\12082006\J788847A.raw

L:705 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:480
L:1638 M:254 E: No. of Bases conflict, this line has no nucleotides.